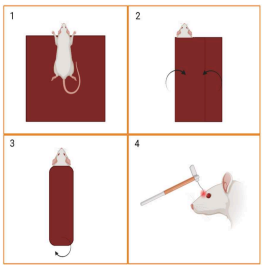
Oct 16, 2024

Facial mechanical hyperalgesia testing in adult rats



DOI
dx.doi.org/10.17504/protocols.io.x54v92n9pl3e/v1

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PRECISE-TBI

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DOI: https://dx.doi.org/10.17504/protocols.io.x54v92n9pl3e/v1

Protocol Citation: Amirah Wright, Susan Murphy, Pamela VandeVord 2024. Facial mechanical hyperalgesia testing in adult rats. **protocols.io https://dx.doi.org/10.17504/protocols.io.x54v92n9pl3e/v1**

Protocol status: Working
We use this protocol and it's working

Created: September 24, 2024

Last Modified: October 16, 2024

Protocol Integer ID: 108270

Keywords: PRECISE-TBI, Traumatic Brain Injury, TBI, pain, rat, hyperalgesia, von Frey, facial mechanical hyperalgesia testing in adult rat, facial mechanical hyperalgesia in adult rat, facial mechanical hyperalgesia testing, facial mechanical hyperalgesia, periorbital region of the face, manual von frey filament, therapeutic, clinical translation of therapeutic

Disclaimer

None

Abstract

This is a protocol to describe the materials and methods utilized to perform facial mechanical hyperalgesia in adult rats. The model utilizes manual von Frey filaments applied to the periorbital region of the face using the “ascending stimulus” method. Pressure is applied for ~3 seconds until a response is observed.

The posting of this protocol is part of the mission of the PREClinical Interagency reSearch resourcE-TBI (PRECISE-TBI, precise-tbi.org), which aims to improve clinical translation of therapeutics by providing an online catalog and standardized protocols to reduce the variability of model usage between laboratories.

Materials

Stoelting Touch Test Sensory Probes, [RRID: SCR_025646]
bandana or towel

Troubleshooting

1 Restrain the rat so that only the head is exposed.

2 Take a towel or bandana and place it down on a flat surface.

3 Place the animal onto the towel in a prone position

4 Wrap both sides of the towel tightly around the animal, with its arms tucked into the towel as well.

5 Fold the excess material under the rat.

6 Once restrained, have one person hold the rat for a few minutes until it calms down.

7 Once calm, you can begin the test. Take the sensory probe and apply pressure to the periorbital region of the rat's face. Apply pressure for ~3 seconds. (See: Note 1 and 2)

8 Keep going up in force values until a reaction has been observed. (See: Note 3)

9 Once a response has been observed and recorded, unwrap the animal and place them back into their home cage.

Notes

10 Note 1: For our purposes, we used the following filaments: 10, 15, 26, 60, 100, 180, and 300.
Note 2: The finer filaments will bend or bow when applied but thicker filaments will not bend as easily or at all.
Note 3: Common reactions to look out for are: jerking away from the filament, squinting of the eyes, audible noise, and short teeth chattering